

Amidon Avenue Bridge Replacement @ Arkansas River



Public Works &
Utilities/Engineering

May 2, 2022



Background



- Existing bridge was built in 1964
- On January 12, 2021 the City Council approved funding for design of the project
- On July 20, 2021 the City Council approved a design contract with JEO
- On November 1, 2021, District VI Advisory Board (DAB) unanimously approved the design concept, including closure of the bridge for construction
- On December 7, 2021, City Council unanimously approved the design concept, including closure of the bridge
- On March 24, 2022, a neighborhood meeting was held to discuss construction options and traffic/neighborhood impacts



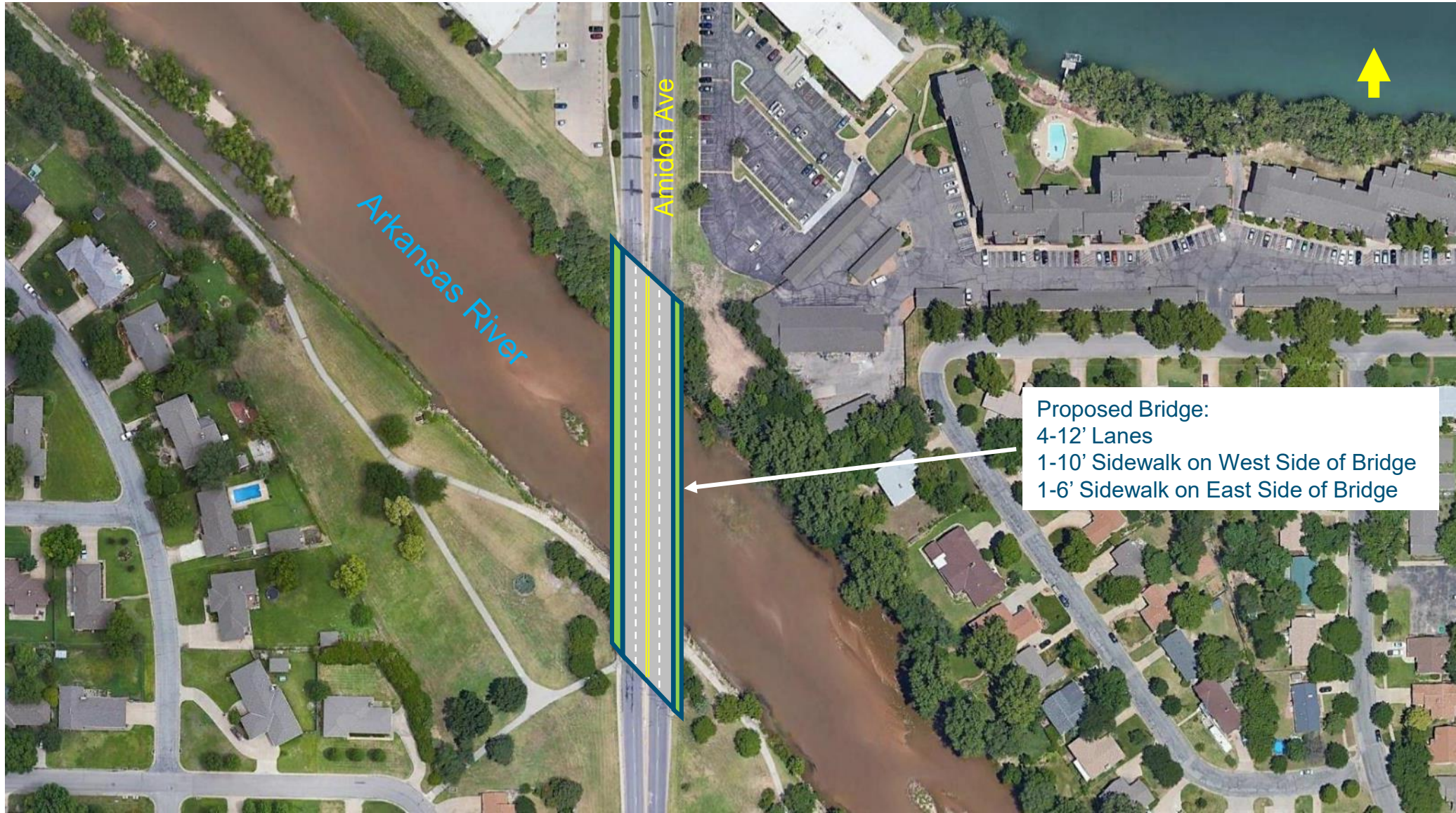
Existing Bridge



Existing Bridge



Proposed Amidon Avenue Bridge Concept



Option 1: New Bridge, Full Closure to Traffic



Duration of Traffic Impact: 14 months
Est. Construction Cost: \$7.5 million
Construction Begins: Fall 2022

- 75+ year lifespan
- Bridge is closed to traffic during construction
- A signed detour is provided
- Pedestrian traffic along the river maintained thru a temporary path south of the bridge

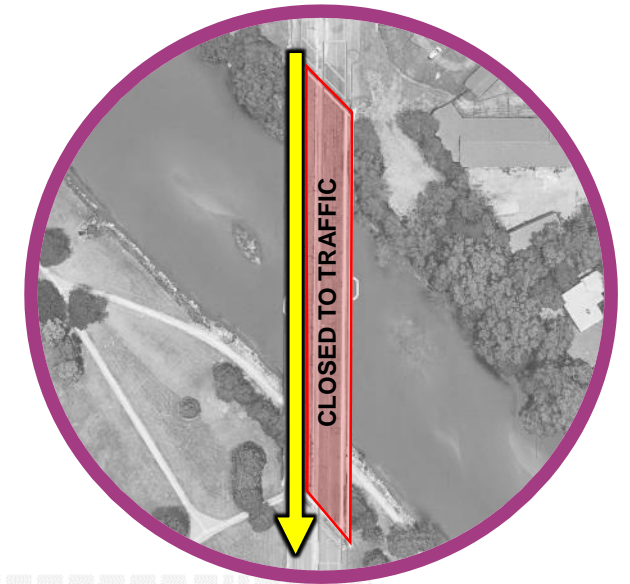
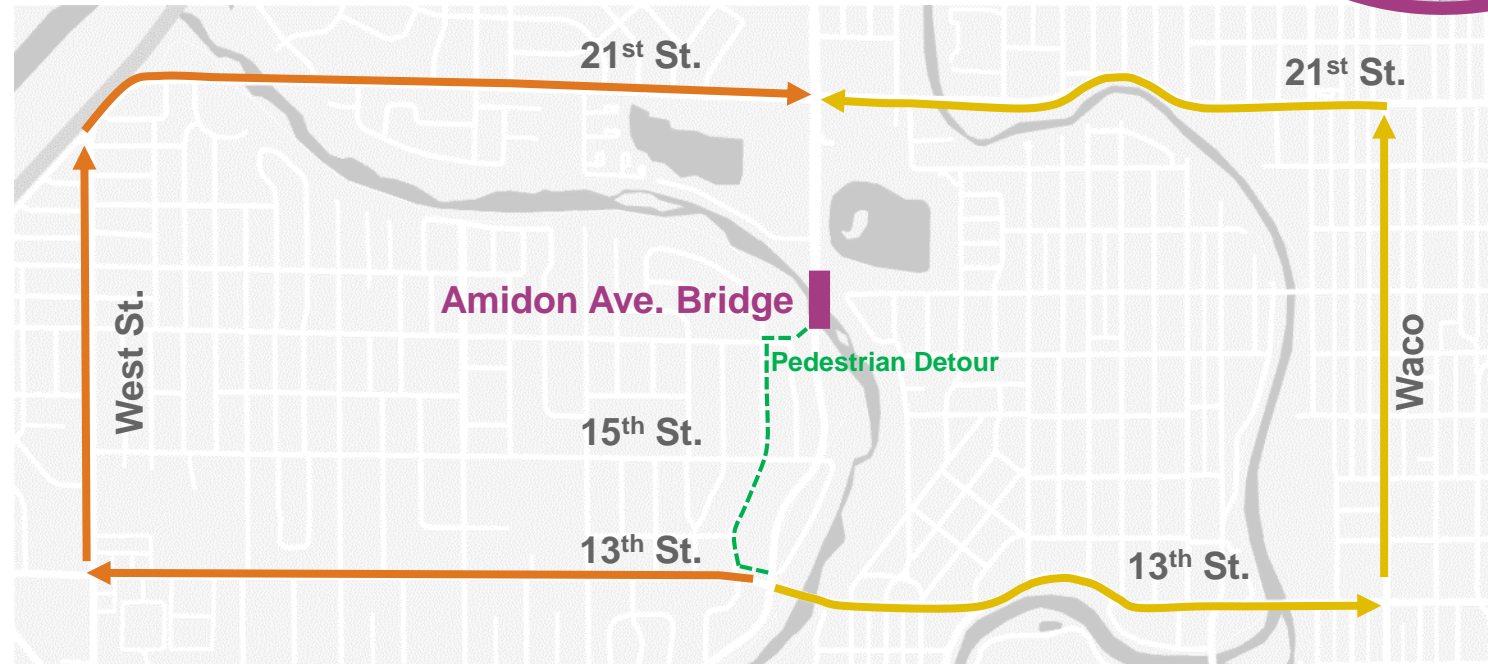


Option 2: New Bridge, One Lane/One Direction Traffic



Duration of Traffic Impact: 23 months
Est. Construction Cost: \$10.2 million
Construction Begins: Delayed to Fall 2023

- 75+ year lifespan
- One lane of traffic during construction
- A signed detour is provided for the other direction
- Pedestrian traffic along river requires a detour to 13th Street

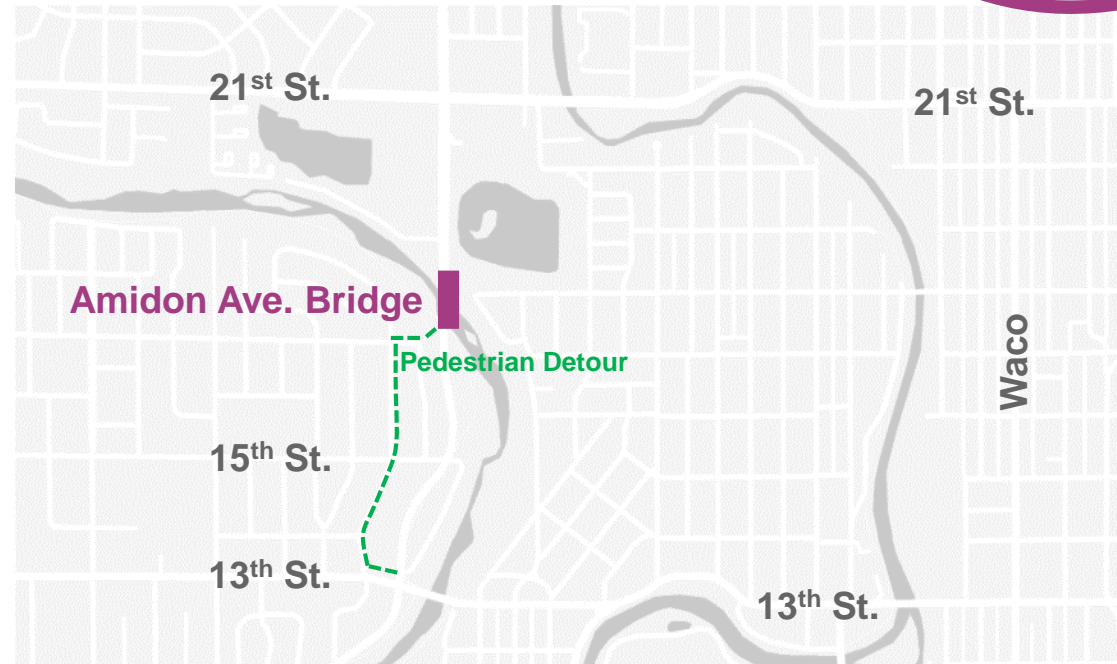
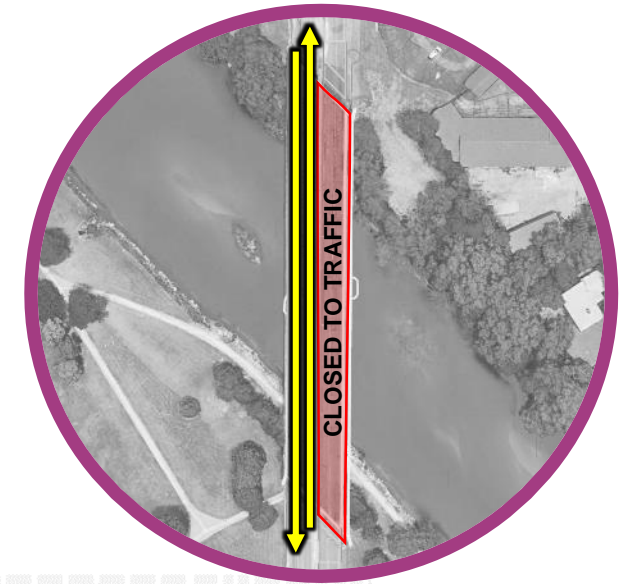


Option 3: New Bridge, One Lane Open in Each Direction



Duration of Traffic Impact: **25 months+**
Est. Construction Cost: **\$11.0 million+**
Construction Begins: Delayed to Fall 2023

- 75+ year lifespan
- Two lanes of traffic (one lane each direction) during construction
 - Lanes are very narrow for half of the construction time. Right-of-way and easement acquisitions possible.
- No signed detour required
- Pedestrian traffic along river requires a detour to 13th Street

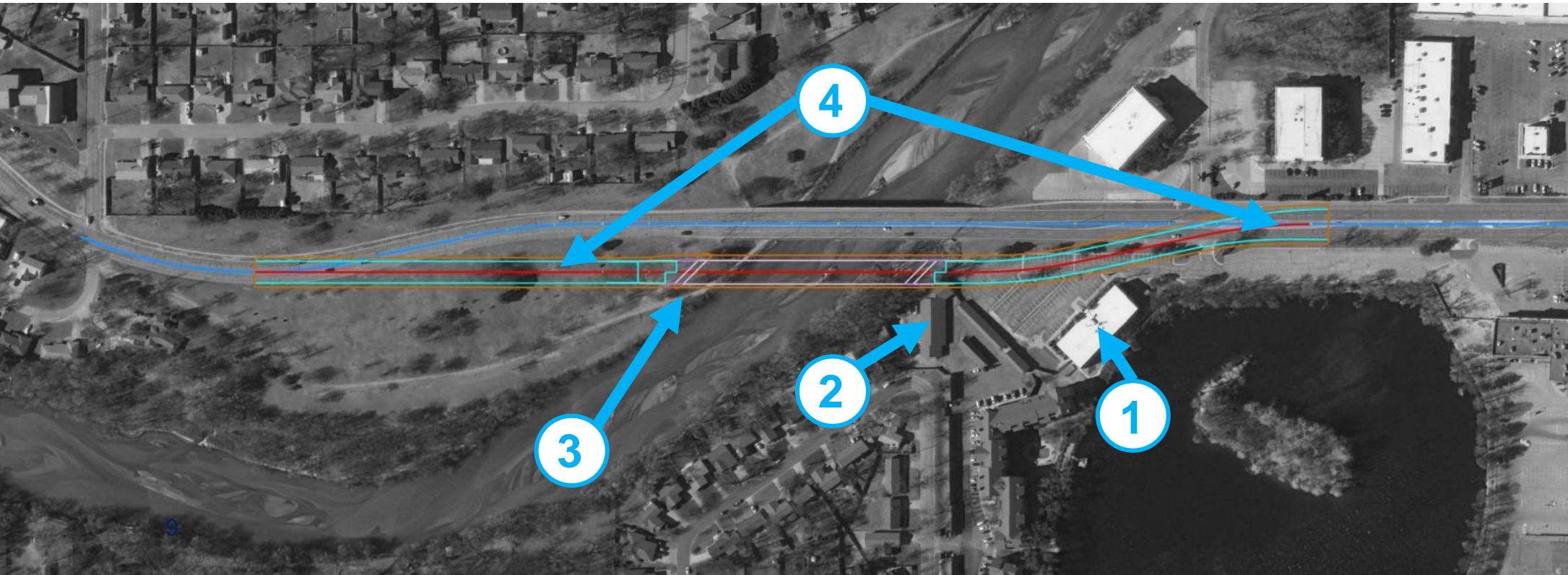


Option 3A: Offset Parallel Alignment



Duration of Traffic Impact: 2 months
Est. Construction Cost: \$11.0 to \$14.4 million
Construction Begins: Delayed to Fall 2023

- 1 Office Park Buyout (\$1.3M+ tax appraisal)
- 2 Parking Garage Building Removed
- 3 Need Retaining Wall or Longer Bridge
- 4 Additional Road Work



Option 3B: Offset to Minimize Office Park Impact



Duration of Traffic Impact: 2 months
Est. Construction Cost: \$12.1 to \$14.4 million
Construction Begins: Delayed to Fall 2023

- 1 40 Parking Spaces of Office Park Removed
- 2 Parking Garage Building Removed
- 3 Additional Road Work
- 4 \$1.5M+++ in Extra Bridge Length
- 5 Bike Path May Require Longer Bridge



Summary of Options



Amidon Bridge Construction Options Summary

Option	Scope	Expected Life Span	Traffic	Start	Duration	Estimated Cost
1	Replace Bridge	75+ years	Bridge Closed	Fall 2022	14 months	\$7.5 million*
2	Replace Bridge	75+ years	One Lane - one direction	Fall 2023	23 months	\$10.2 million
3	Replace Bridge	75+ years	Two Lanes - one each direction	Fall 2023	25 months+	\$11.0 million+
4	Rehabilitate Bridge**	<10 years	Two Lanes - one each direction	Fall 2023	7 months	\$4.2 million
*Cost will increase to include WFD satellite coverage						
**After life of rehabilitation, one of options 1-3 would be necessary						



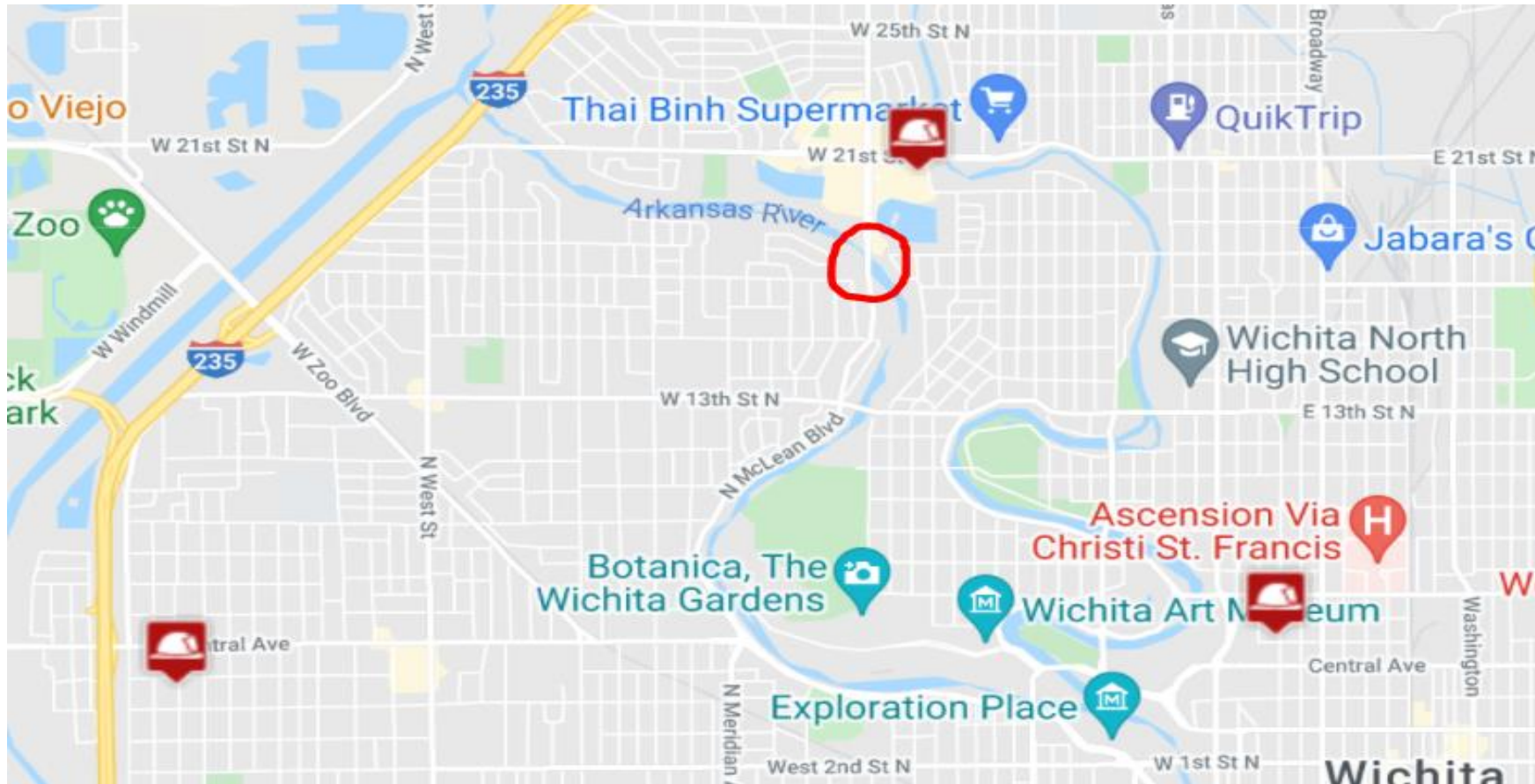
OPTION 1 PREFERRED – Full Closure



- **Accommodations to support full closure**
 - Wichita Fire Department temporary satellite station
 - Detour bus route
 - Signage
 - Communications plan/social media
- **Shorter duration for construction means lesser impact to neighborhoods**



WFD Response – Original Proposed Plan



WFD Response - Revised Plan

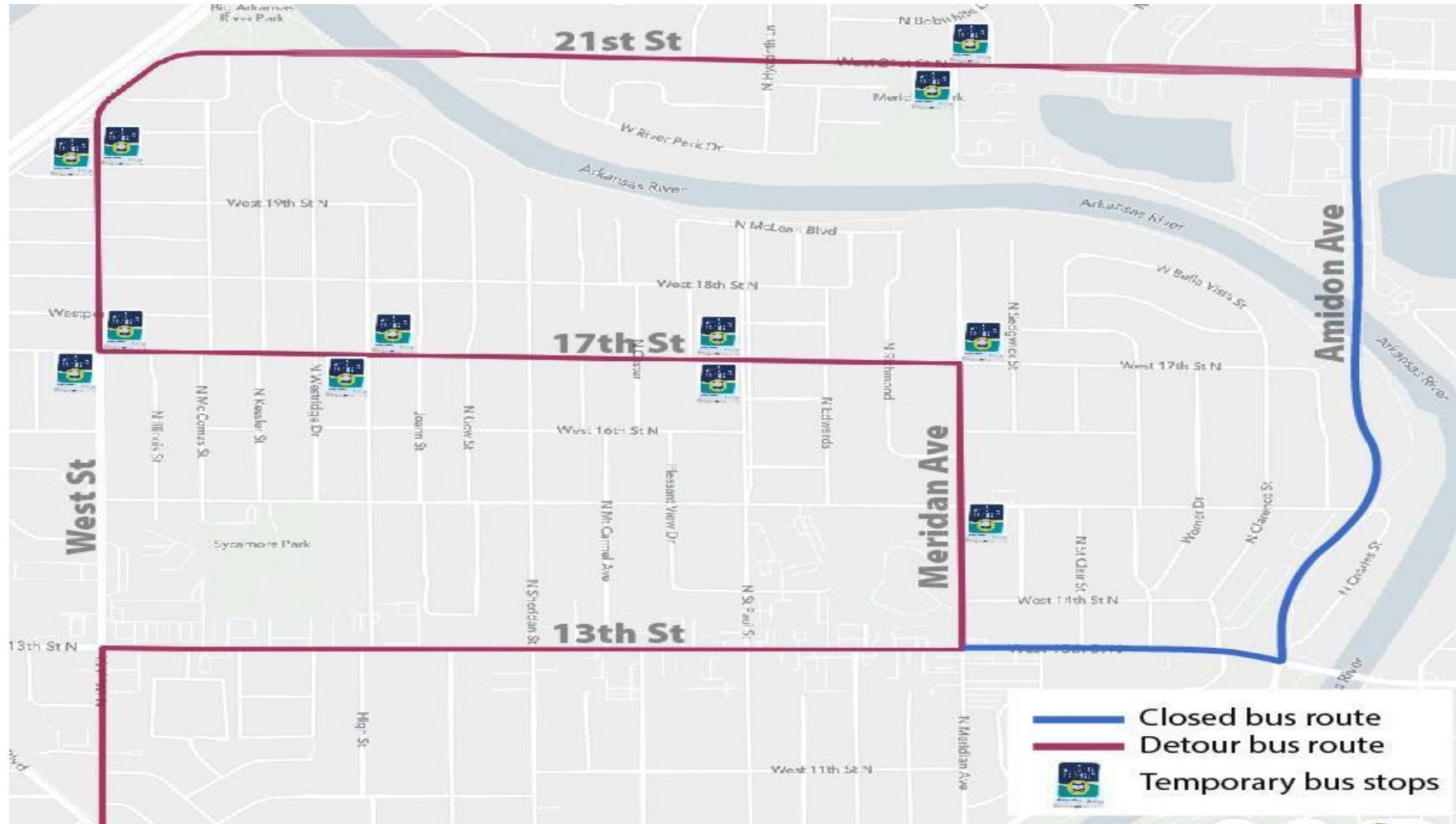


- Provide temporary facilities on 13th Street to accommodate an Engine
 - Respond to fire and medical
- Expect to be ready by September 1, 2022

- SG County EMS advised that the closure should not impact their response times



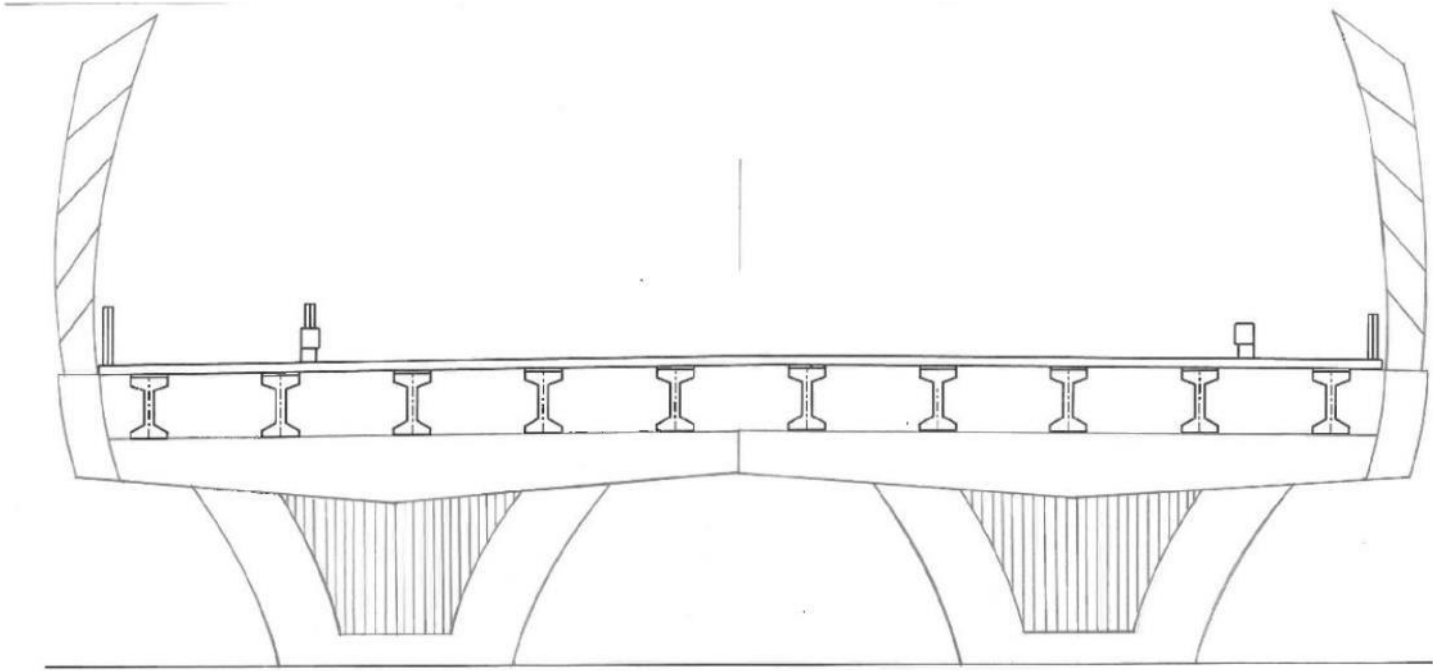
Detour Bus Route



Business Signage



Overall Design Elements



Staff Recommendation/Next Steps



- Based on input from the March 24 public meeting, along with the WFD, Transit, signing and communications plans, staff recommends the bridge be closed for construction
- Return to City Council in July to affirm previous action for full closure and approval of aesthetics plan and the construction budget
- Construction anticipated to start in September of 2022
- Construction duration estimated to be 14 months
- Update and activate communication plan prior to closure



Recommendation



- Staff recommends that the District Advisory board affirm their previous recommendation to close the bridge for construction



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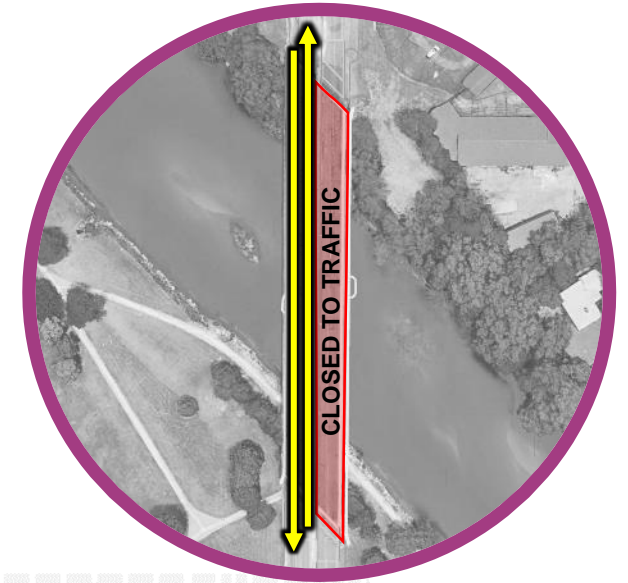
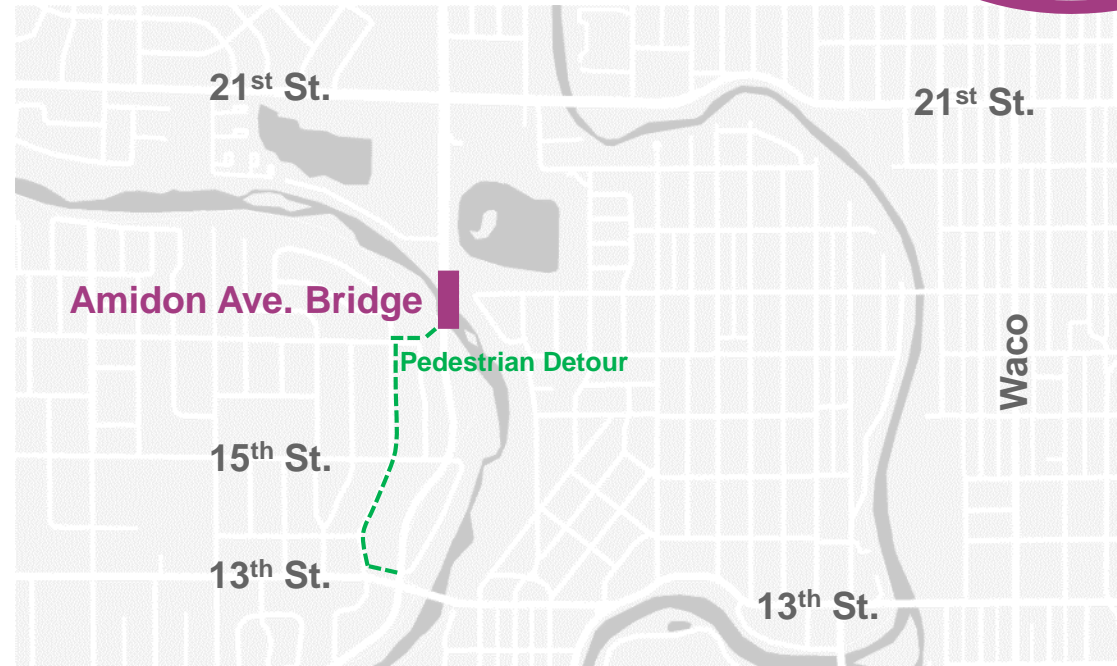


Option 4: Bridge Repairs, One Lane Open in Each Direction

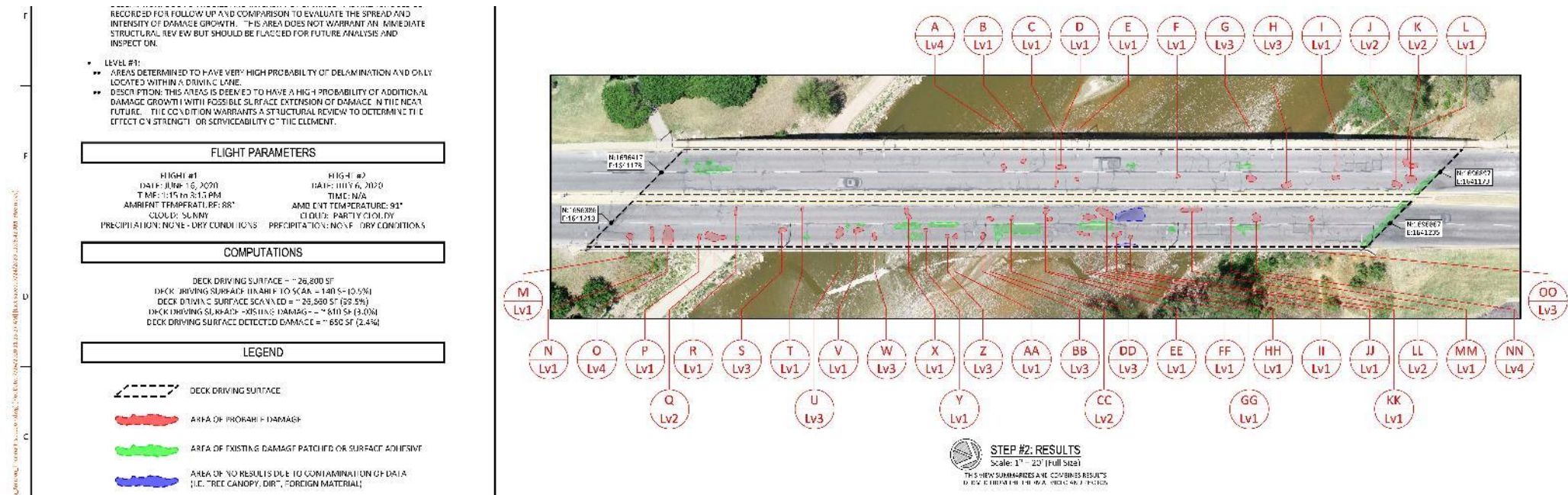


Duration of Traffic Impact: 7 months
Est. Construction Cost: \$4.2 million
Construction Begins: Delayed to Fall 2023

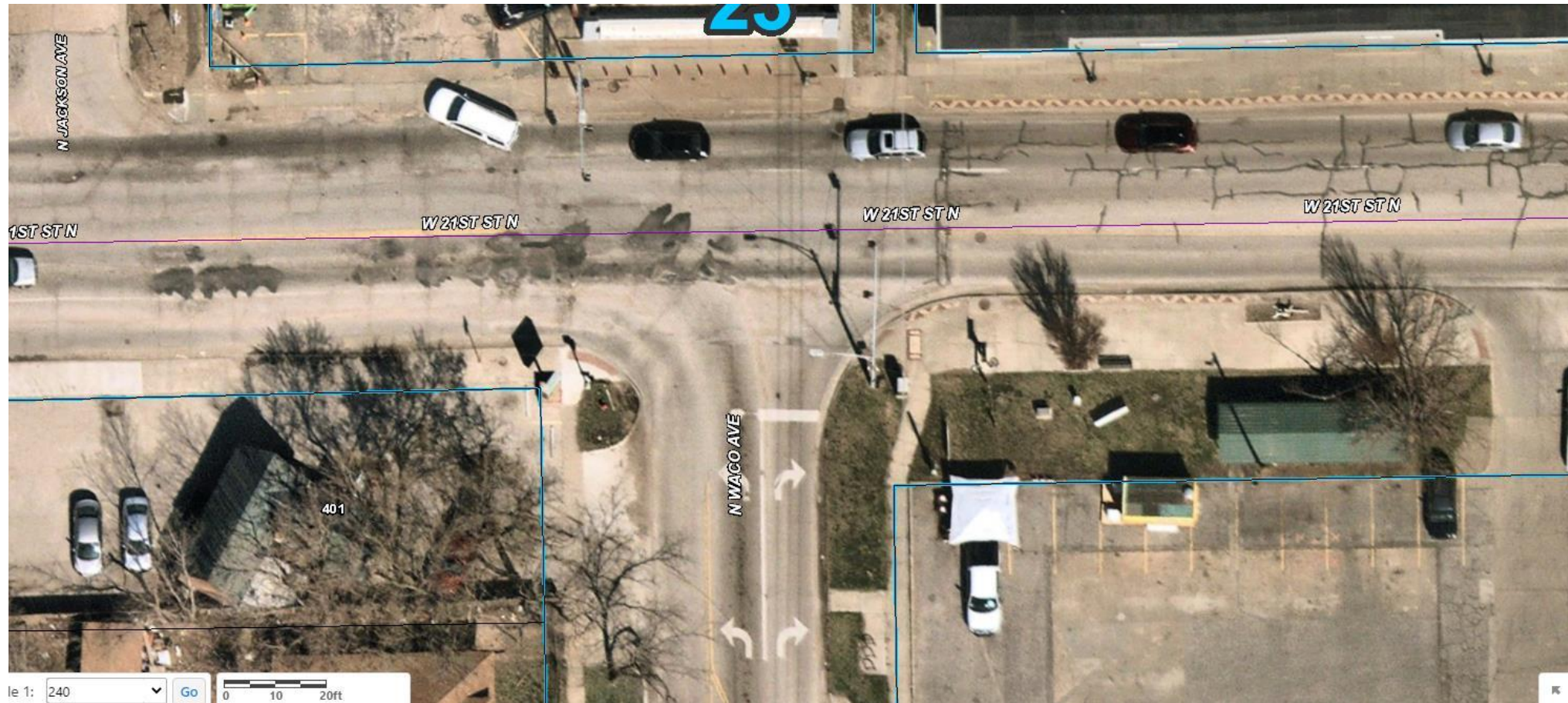
- < 10-year lifespan; then Option 1, 2 or 3 would be necessary at that time, at a higher cost
- Two lanes of traffic (one lane each direction) during construction
- No signed detour required
- Pedestrian traffic along river requires a detour to 13th Street



Existing Bridge



21st and Waco Intersection



Does not include User Costs

Cost Evaluation



LEGEND

Deck Patch, Mill and Overlay

Redeck

Superstructure Replacement

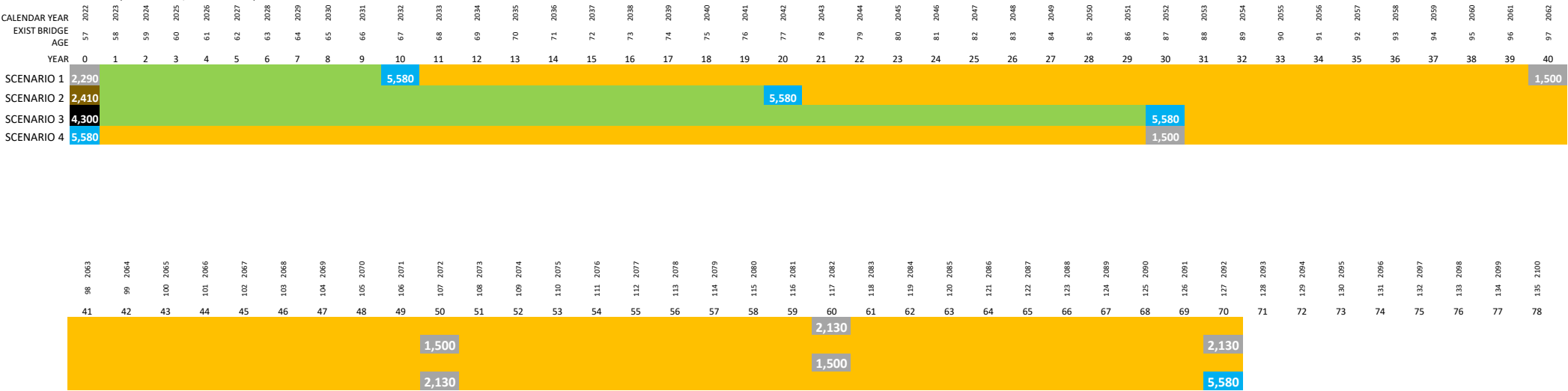
Full Replacement

Existing Bridge In Service

Replacement Bridge In Service



Maintenance Intervals (2021 Dollars, in Thousands)



Suggested Detour



Financial



- Existing budget \$500,000
- Budget programmed in the approved 2022-2031 Capital Improvement Program (CIP)
 - \$5,000,000 in 2022 for construction
 - \$225,000 in 2022 for art



Impacts of Building the Bridge in Segments



- Increased Cost (estimated to be 20%-30%)
- Increased Construction length (estimated to be 4-6 months of additional construction time)
- Safety
- Bike path detour options (unknown)



Detour Options Evaluated

